VARYTEC

User’s manual

LED MAGIC MUSHROOM

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1. Safety instructions

FOR SAFE AND EFFICIENT OPERATION

Be careful with heat and extreme temperatureAvoid exposing it
to direct rays of the sun or near a heating appliance.
Not put it in a temperature bellow 41°F /5°C, or exceeding 95°F /35°C.

Keep away from humidity, water and dust
Do not place the set in a location with high humidity or lots of dust.
Containers with water should not be placed on the set.

Keep away from sources of hum and noise
Such as transformer motor, tuner, TV set and amplifier.

To avoid placing on un-stable location
Select a level and stable location to avoid vibration.

Do not use chemicals or volatile liquids for cleaning
Use a clean dry cloth to wipe off the dust, or a wet soft cloth for stubborn dirt.

If out of work, contact sales agency immediately
Any troubles arose, remove the power plug soon, and contact with an engineer for repairing,
do not open the cabinet by yourself, it might result a
danger of electric shock.

Take care with the power cable
Never pull the power cable to remove the plug from the receptacle, be sure
to hold the plug. When not using the player for an extended period of time
be sure to disconnect the plug from the receptacle.

2. Introduction

2.1. CONTROL FEATURES

- 4-channel DMX-512 LED effect light
- Blackout/static/strobe
- Individual control of red, green and blue LEDs

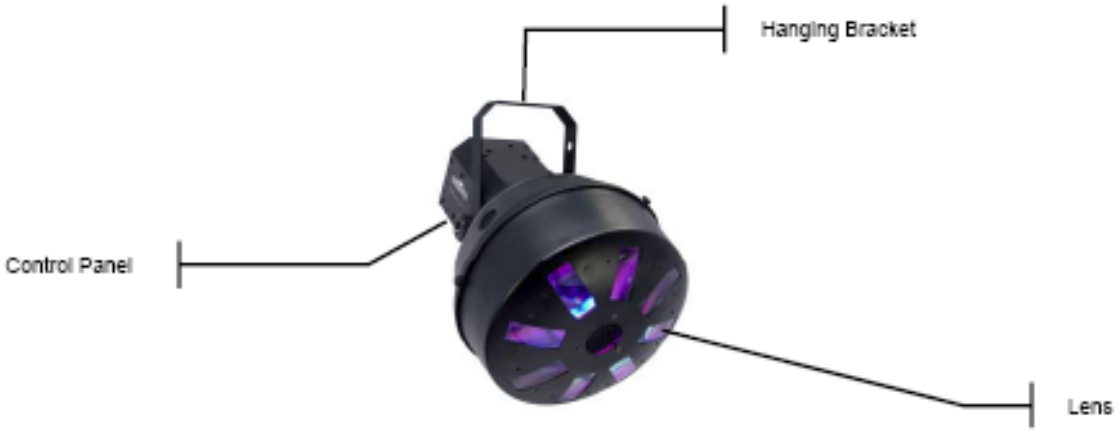
2.2. ADDITIONAL FEATURES

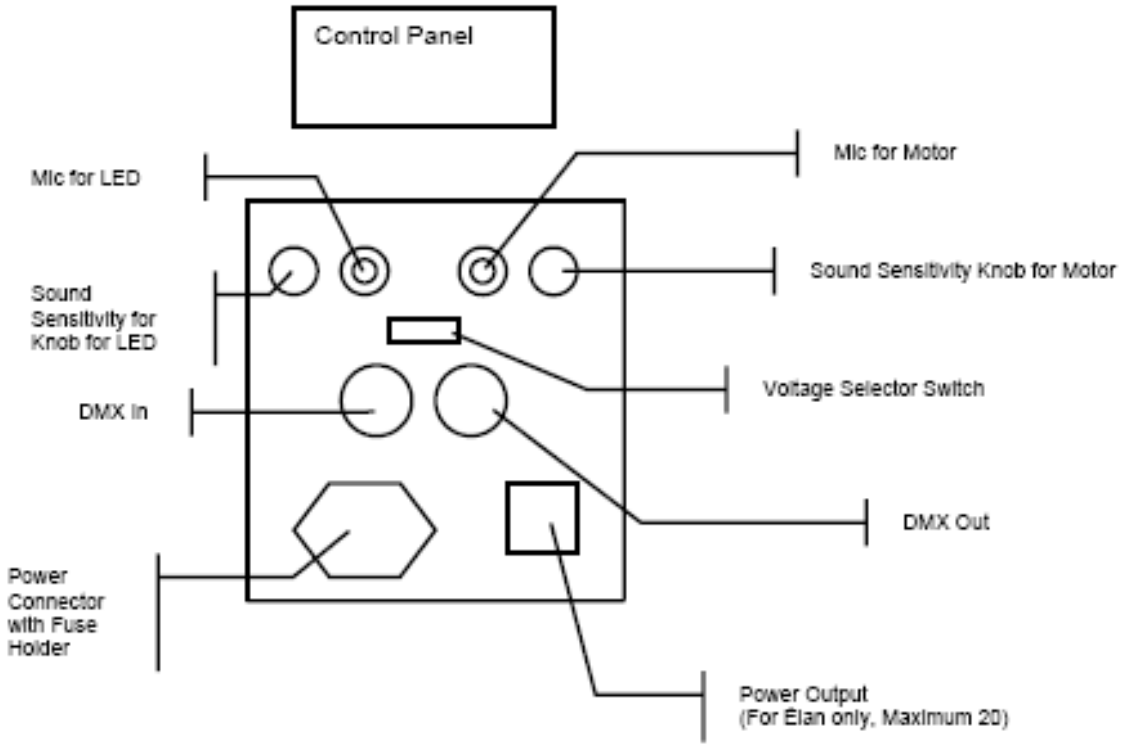
- Built-in automated programs via master/slave
- Built-in sound active programs via master/slave
- (2) built-in microphones: 1 for LEDs, 1 for motor
- (2) sound sensitivity knobs: 1 for LEDs, 1 for motor
- Additional power output for daisy chaining units together (max. 20 units)
- Ultra bright LEDs
- Low power consumption
- Wide coverage area
- Fan cooled

2.3. DMX Channel Summary

CHANNEL	FUNCTION
1	Red
2	Green
3	Blue
4	Strobe

3. Product overview





4. Setup

4.1. Fuse Replacement

With a flat head screwdriver wedge the fuse holder out of its housing. Remove the damaged fuse from its holder and replace with exact same type fuse. Insert the fuse holder back in its place and reconnect power.

4.2. Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX-512 controller or to run synchronized shows on two or more fixtures set to a master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.

4.3. Important:

Fixtures on a serial data link must be daisy chained in one single line. To comply with the EIA-485 standard no more than 32 devices should be connected on one data link. Connecting more than 32 fixtures on one serial data link without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.
Maximum recommended serial data link distance: 500 meters (1640 ft.) Maximum recommended number of fixtures on a serial data link: 32 fixtures

4.4. Data Cabling

To link fixtures together you must obtain data cables. You can purchase CHAUVET-certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

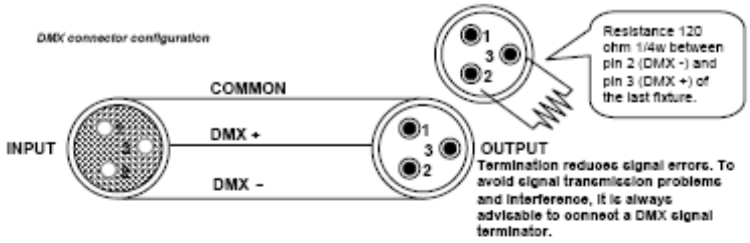
4.5. DMX DATA CABLE

Use a Belden© 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Standard microphone cables cannot transmit DMX data reliably over long distances. The cable will have the following characteristics:

2-conductor twisted pair plus a shield
Maximum capacitance between conductors – 30 pF/ft.
Maximum capacitance between conductor and shield – 55 pF/ft.
Maximum resistance of 20 ohms / 1000 ft.
Nominal impedance 100 – 140 ohms.

4.6. CABLE CONNECTORS

Cabling must have a male XLR connector on one end and a female XLR connector on the other end.


DMX connector configuration
COMMON
INPUT
DMX +
DMX –
1
3
2
OUTPUT
Resistance 120 ohm 1/4w between pin 2 (DMX -) and pin 3 (DMX +) of the last fixture.
Termination reduces signal errors. To avoid signal transmission problems and interference, it is always advisable to connect a DMX signal terminator.

CAUTION Do not allow contact between the common and the fixture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test cables with an ohm meter to verify correct polarity and to make sure the pins are not grounded or shorted to the shield or each other.

3-PIN TO 5-PIN CONVERSION CHART

Note! If you use a controller with a 5 pin DMX output connector, you will need to use a 5 pin to 3 pin adapter. CHAUVET Model No: DMX5M, or DMX5F.
The chart below details a proper cable conversion:

3 PIN TO 5 PIN CONVERSION CHART

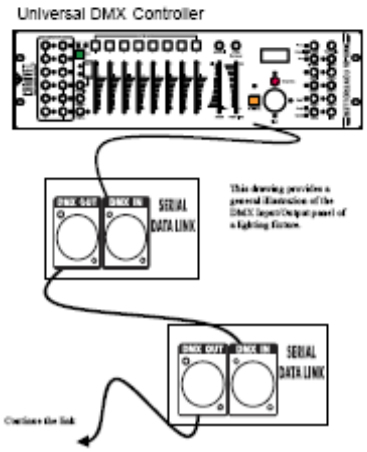
Conductor	3 Pin Female (output)	5 Pin Male (input)
Ground/Shield	Pin 1	Pin 1
Data (-) signal	Pin 2	Pin 2
Data (+) signal	Pin 3	Pin 3
Do not use		Do not use
Do not use		Do not use

Setting up a DMX Serial Data Link

1. Connect the (male) 3 pin connector side of the DMX cable to the output (female) 3 pin connector of the controller.
2. Connect the end of the cable coming from the controller which will have a (female) 3 pin connector to the input connector of the next fixture consisting of a (male) 3 pin connector.
3. Then, proceed to connect from the output as stated above to the input of the following fixture and so on.

CHAUVET Certified DMX Data Cables

Order Code	Description
DMX1.5	DMX Cable 1.5m/4.9ft
DMX4.5	DMX Cable 4.5m/14.8ft
DMX10	DMX Cable 10m/32.8ft

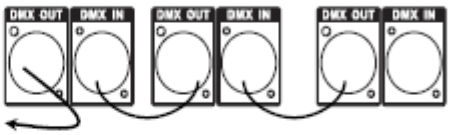


Master/Slave Fixture Linking

1. Connect the (male) 3 pin connector side of the DMX cable to the output (female) 3 pin connector of the first fixture.
2. Connect the end of the cable coming from the first fixture which will have a (female) 3 pin connector to the input connector of the next fixture consisting of a (male) 3 pin connector. Then, proceed to connect from the output as stated above to the input of the following fixture and so on.

Mounting

Often, the setup for master-slave and Stand alone operation requires that the first fixture in the chain be initialized for this purpose via either settings in the control panel or DIP-switches. Secondarily, the fixtures that follow may also require a slave setting. Please consult the "Operating Instructions" section in this manual for complete instructions for this type of setup and configuration.



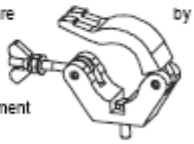
ORIENTATION

This fixture may be mounted in any position provided there is adequate room for ventilation.

RIGGING

It is important never to obstruct the fan or vents pathway. Mount the fixture using, a suitable "C" or "O" type clamp. Adjust the angle of the fixture by loosening both knobs and tilting the fixture. After finding the desired position, retighten both knobs.

Hanging Clamp



Note!
Clamp is sold separately.

- When selecting installation location, take into consideration lamp replacement access and routine maintenance.
- Safety cables must always be used.
- Never mount in places where the fixture will be exposed to rain, high humidity, extreme temperature changes or restricted ventilation.

5. Operation

Stand-Alone Mode (Sound-Active):

This mode allows a single unit to run to the beat of the music, or the unit will auto change in Auto Mode.

1) Set dipswitches position to Sound Active Mode.

Mode	Dipswitches
Sound Active	All Off
Sound Active w/ Strobe	9, 12 On
Fixed Speed strobe w/ movement	9, 10, 11 On
Strobe w/ Color Change	9, 11 On
Sound Activated (no sound for 3 sec. unit will change color rotation)	9, 10, 12 On

2) The unit will react to the low frequencies of music via the internal microphone in Sound Active mode.

3) Use the audio sensitivity knob on the back of the unit to make the unit more or less sensitive in Sound-Active mode. Turning the knob counterclockwise decreases the sensitivity; turning the knob clockwise increases the sensitivity.

Master/Slave Mode (Master Sound):

This mode will allow you to link up to 32 units together without a controller.

1) Use standard DMX cables to daisy chain your units together via the DMX connector on the side of the units. For longer cable runs we suggest a terminator at the last fixture.

2) Choose a unit to function as the Master. Turn dipswitches to the Master position on the unit. The unit must be the first unit in line, and then simply chain the units together using DMX cable.

3) Turn dipswitch 1 to the "on" position on the slave units, and the slave units will react the same as the master.

Mode	Dipswitches
Master Sound	9 On
Fixed Speed Strobe with Color Change	9, 10, 11 On
Strobe with Color Change Effect	9,11 On
Sound Activated (no sound for 3 sec. unit will change color rotation	9, 10, 12 On

DMX Mode

DMX mode allows the user to select specific colors displayed, as well as the shutter speed (for strobe effect), by adjusting the value of four separate DMX channels. For more information on setting the address, or if you are unfamiliar with DMX, please read the DMX Primer (pg. 15) and address information (pg. 12-13).

1) To place the fixture into DMX mode, connect a DMX cable into the "DMX In" from a DMX controller or other DMX unit and set the DMX address. This will automatically put the fixture in DMX mode when it senses a DMX signal.

Note: In DMX mode, movement is still controlled via sound activation. To adjust the sensitivity of the unit, turn the knob slowly clockwise (when facing unit) to make the unit more sensitive.

DMX Channel Values

CHANNEL	VALUE	FUNCTION
1	0~255	Red 0~100%
2	0~255	Green 0-100%
3	0~255	Blue 0-100%
4	0~255	Strobe 0-20Hz

SETTING THE STARTING ADDRESS

This DMX mode enables the use of a universal DMX controller device. Each fixture requires a "start address" from 1 to 512. A fixture requiring one or more channels for control begins to read the data on the channel indicated by the start address. For example, a fixture that uses 6 DMX channels and was addressed to start on DMX channel 100, would read data from channels: 100, 101, 102, 103, 104, and 105. Choose start addresses so that the channels used do not overlap, and note the start address selected for future reference.

If this is your first time addressing a fixture using the DMX-512 control protocol, we suggest jumping to the Appendix Section and reading the heading "DMX Primer". It contains very useful information that will help you understand its use.

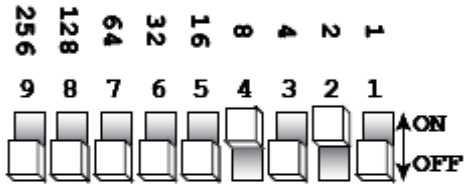
Set the start address using the group of DIP switches located usually on bottom of the fixture. Each dip switch has an associated value. Adding the value of each switch in the ON position will provide the start address. Figuring out which switches to toggle ON given a specific start address can be accomplished by determining which switch values will add up to the address value and turning these switches on. Do so by doing the following:

1) Determine the largest value switch that is less than the start address. Turn this switch on.
2) Subtract the value of the switch you just turned on from the starting address number.
3) Determine the largest value switch that is less than the remainder from the previous subtraction. Turn this switch on.
4) Subtract the value of the switch you just turned on from the remainder of the previous subtraction.
5) Repeat steps three and four until you have a remainder of zero.

EXAMPLE STARTING ADDRESS

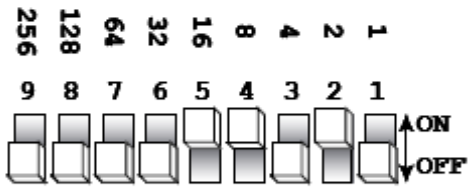
Address 10

Switch # 4 = 8
Switch # 2 = 2
Total = 10



Address 24

Switch # 5 = 16
Switch # 4 = 8
Total = 24



Resolving address using simple math.

Address 233

233 – (128) = 105, Turn ON Dip # 8
105 – (64) = 41, Turn ON Dip # 7
41 – (32) = 9, Turn ON Dip # 6
9 – (8) = 1, Turn ON Dip # 4
1 – (1) = 0, Turn ON Dip # 1

DIPSWITCH	(DMX VALUE)
1	1
2	2
3	4
4	8
5	16
6	32
7	64
8	128
9	256

DMX QUICK REFERENCE CHART

DMX Address Quick Reference Chart

Dip Switch Position

DMX DIP SWITCH SET	#9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1

6. Technical Spezifications

WEIGHT & DIMENSIONS

Length	16in (406mm)
Width	11in (279mm)
Height	11in (279mm)
Weight	11lbs (5kgs)

POWER

Switch-selectable power settings	120V 60Hz AC or 230V 50Hz
Power Consumption	36W (0.37A) max at 120V
Inrush Power	24W (0.22A) at 120V
Power Factor	0.76 at 120V
Power Output (AC Plug)	8A (960W at 120V) max

LIGHT SOURCE

LED	224 (88 red, 48 green, 88 blue) 100,000hrs

PHOTO OPTIC

Beam Angle	70°

THERMAL

Maximum ambient temperature	104°F (40°C)

FUSE

Main	1.5A 250V fast blow

CONTROL & PROGRAMMING

Data input	locking 3-pin XLR male socket
Data output	locking 3-pin XLR female socket
Data pin configuration	pin 1 shield, pin 2 (-), pin 3 (+)
Protocols	DMX-512 USITT
DMX Channels	4

ORDERING INFORMATION

Elan	Elan

WARRANTY INFORMATION

Warranty	2-year limited warranty

Importeur:

B & K Braun GmbH

Industriestraße 1

D-76307 Karlsbad

www.bkbraun.com

info@bkbraun.com

RoHS COMPLIANT 2002/95/EC